metal component which is within the interior pore structure of the molecular sieve and which comprises a non-lanthanide base metal in an oxidation state greater than zero, to crack the heavy hydrocarbon feed to lighter liquid cracking products of reduced sulfur content.

Amend claim 4 to read:

4. (Amended) A method according to claim 1 in which the product sulfur reduction catalyst comprises a large pore size or intermediate pore size zeolite as the molecular sieve component and, as the metal component, at least one metal of Period [3] 4, groups 5, 8, 9 or 12 of the Periodic Table.

Amend claim 11 to read:

11. (Amended twice) In a fluid catalytic cracking process in which a heavy hydrocarbon oil feed comprising organosulfur compounds is catalytically cracked to lighter products by contact in a cyclic catalyst recirculation cracking process with a circulating fluidizable catalytic cracking catalyst inventory consisting of particles having a size ranging from about 20 to about 100 microns, comprising:

(i) catalytically cracking the heavy hydrocarbon oil feed in a catalytic cracking zone operating at catalytic cracking conditions of elevated temperature by contacting feed with a source of regenerated cracking catalyst to crack the heavy hydrocarbon oil feed to lighter products and produce a cracking zone effluent comprising lighter cracked products and spent catalyst containing coke and strippable hydrocarbons;

(ii) discharging and separating the effluent mixture into a cracked product rich vapor phase and a solids rich phase comprising spent catalyst;

(iii) removing the vapor phase as a product and fractionating the vapor to form liquid cracking products including gasoline,

(iv) stripping the solids rich spent catalyst phase to remove occluded hydrocarbons from the catalyst,

(v) transporting stripped catalyst from the stripper to a catalyst regenerator;

(vi) regenerating stripped catalyst by contact with oxygen containing gas to produce regenerated catalyst; and

(vii) recycling the regenerated catalyst to the cracking zone to contact further quantities of heavy hydrocarbon feed,

the improvement which comprises

reducing the sulfur content of a the gasoline portion of the liquid cracking products, by catalytically cracking the feed fraction at elevated temperature in the presence of a product sulfur reduction catalyst which comprises a porous molecular sieve having a metal component which is within the interior pore structure of the molecular sieve and which comprises a non-lanthanide base metal in an oxidation state greater than zero, to produce liquid cracking products of reduced sulfur content.

B3

Amend claim 13 to read:

13. (Amended) A method according to claim 12 in which the product sulfur reduction catalyst comprises a large pore size or intermediate pore size zeolite as the molecular sieve component and, as the metal component, at least one metal of Period [3] 4, groups 5, 8, 9 or 12 of the Periodic Table.

B4

Add the following claims

32. A method according to claim 4 in which the metal component is vanadium.

33. A method according to claim 4 in which the metal component is iron.

B5

34. A method according to claim 13 in which the metal component is vanadium.

35. A method according to claim 13 in which the metal component is iron.

Remarks

1. This is in response to the Office Action of 19 September 2000.